

invention include, but are not limited to, chelators of metals required for activity of PPO and/or POD, inhibitors of the production or activity of PPO or POD, as well as sulfhydryl-containing agents, e.g., cysteine, ascorbic acid, L-cystine, sodium thiosulfate, glutathione, or any combination thereof. Preferred media compositions 5 of the invention are non-liquid compositions, e.g., powder or crystal formulations, comprising at least one of the agents of the invention in an preferably in an amount effective to enhance plant cell, tissue or plant survivability, decrease browning of plant cells, plant tissue or plants, inhibit the production or activity of PPO or POD in the plant cells, plant tissue or plant, or any combination thereof.

10

E Brief Description of the Figures

Figures 1A-D depict levels of *Agrobacterium*-mediated infection of soybean explants 5 after co-culture or 28 days in shoot induction media. A) (1) shows an explant at 5 days after co-culture with at least one GUS⁺ foci at the cot-node region. 15 A) (2) shows a sliced explant after 28 days in shoot induction media with GUS staining, and A) (3) shows stable T-DNA integration. B) shows enzymatic browning on treated and untreated explants with (bottom) and without (top) GUS staining. C) is data from experiments with cysteine concentrations ranging from 0-400 mg/l. D) depicts the average frequency of explants exhibiting at least one GUS⁺ 20 focus in the cot-node region across eight experiments. Standard error between experiments is represented by [τ] above each cysteine treatment (0 mg/l r = 8, n = 106; 400 mg/l r = 6, n = 79, 1000 mg/l r = 5, n = 41). Both treatments of 400 and 1000 mg/l cysteine significantly differ from 0 mg/l cysteine at $\alpha = 0.05$ ($P < 0.001$). Scores were determined from GUS histological staining on samples of 7-10 explants 25 from 8 experiments and 11 levels of cysteine. The scores were based on the following ranking system: 0 = no GUS⁺ foci on explant; 2 = less than $\frac{1}{2}$ of explants have discrete foci on the cot-node region (< 10); 4 = more than $\frac{1}{2}$ of the explants have < 20 foci at the cot-node region; 6 = more than $\frac{3}{4}$ of the explants have > 20